UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,265	07/29/2003	Claire-Sabine Randriamasy	Q76542	4726

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EXAMINER
YUEN, KAN

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Office Action Summary	10/628,265	RANDRIAMASY ET AL.
	Examiner	**Art Unit**
	Kan Yuen	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 October 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

Response to Arguments

1.   Applicant's arguments, see remark, filed 10/22/2007, with respect to the

rejection(s) of claim(s) 1, and 20 under 102 rejection have been fully considered and are

persuasive. Therefore, the rejection has been withdrawn. However, upon further

consideration, a new ground(s) of rejection is made in view of Kelley et al. (Pat No.:

6542469), and Co-pending application Randriamasy et al. (Pub No.: 2004/0190490) or

application no.: 10/735895.

Allowance Withdrawn

2.   ·   The allowance issued in the previous office action has been withdrawn.

Double Patenting Note

3.   when a system or network or device described in the prior art or co-pending   .

application, which is the same as the system or network or device described in the

specification for carrying out the claimed method, it can be assumed they will inherently

perform the claimed process (see MPEP section 2112.02 Process claims).

Double Patenting

5.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory
obviousness-type double patenting rejection is appropriate where the conflicting claims

are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6.   Claims 1, 3-5, 7-16, 20, 22-24, 26-35 are provisionally rejected on the ground of

nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-

6, 8-12 of copending Application No.10/735895. Although the conflicting claims are not

identical, they are not patentably distinct from each other because of the following:

For claim 1, claim 1 of co-pending application no.: 10/735895 disclosed the method of:

1.   (Original) A device for determining labeled data stream switchpath(s) in a label

switched communication network comprising a multiplicity of label switched routers (LSR),

each stream being associated with a chosen forwarding equivalence class and with a chosen set

of service data, which device is characterized in that it includes:

-    memory means (Mn) adapted to store a table (Tn1) of correspondences between

sets of service data and information data representative of at least two chosen criteria and a

descriptive structure (Tn2) containing information data representative of a state of utilization and

of a topology of the network, and

-    processing means (P) adapted:

a)   to receive a path set-up request containing a set of service data associated with a

stream to be switched, for determining in said table (Tn1) at least two criteria stored in

corresponding relationship to said set of service data associated with the stream,

b)   to ensure the connectivity of said multiplicity of nodes, on the basis of

information data stored in said descriptive structure (Tn2),

c)   to calculate from among said nodes (LSR) possible paths (r*) between a departure

node (LER1) and a destination node (LER2) taking account of at least one of said two criteria

that have been determined and then to deduce an ideal solution ($Z(s)$) from performances ($Z(r^*)$) of said possible paths (r^*) on at least one of said criteria,

    d)   to assign each possible path (r^*) an interest value ($U(r)$) taking account of said ideal solution ($Z(s)$) and then classify said possible paths taking account of their respective interest values, and

        to select a path from among said classified possible paths and then associate with said stream to be switched a label representative of said selected path so that said labeled stream is switched via said path to the destination node (LER2).

Applicant's claims 1, 20 merely broadened the scope of the claim 1 of copending application. In applicant's claim 1, part a, b, c, d is rejected respectively by claim 1, part b, c, d, e of the co-pending application. Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the method as taught by the co-pending application in the applicant's invention. The motivation for using the obviousness in the copending application being that the system greatly reduces the link cost based on difference class of requirements.

For claim 3, 22, applicant merely broadens the scope of the claim 4 of copending application.

For claim 4, 23, applicant merely broadens the scope of the claim 5 of copending application.

For claim 5, 24, applicant merely broadens the scope of the claim 6 of copending application.

For claim 7, 26, applicant merely broadens the scope of the claim 8 of copending application.

For claim 8, 27, applicant merely broadens the scope of the claim 9 of copending application.

For claim 9, 28, applicant merely broadens the scope of the claim 10 of copending application.

For claim 10, 29, applicant merely broadens the scope of the claim 11 of copending application.

For claim 11, 30, applicant merely broadens the scope of the claim 12 of copending application.

For claim 12, 31, applicant merely broadens the scope of the claim 15 of copending application.

For claim 13, 32, applicant merely broadens the scope of the claim 16 of copending application.

For claim 14, 33, applicant merely broadens the scope of the claim 17 of copending application.

For claim 15, 34, applicant merely broadens the scope of the claim 18 of copending application.

For claim 16, 35, applicant merely broadens the scope of the claim 19 of copending application.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-4, 8, 9, 12, 17-23, 27, 28, 31, 36-40 are rejected under 35

U.S.C. 102(e) as being anticipated by Kelley et al. (Pat No.: 6542469).

3.   In claim 1, Kelley et al. disclosed the method of a) ensuring that at least a portion

of the multiplicity of nodes are connected (Kelley et al. see fig. 1, see column 2, lines

52-67). The system ensures that the probability of inoperable link or nodes blocks a

transfer of data is minimized. Therefore, the system is trying to ensure all nodes are

connected and active; b) for the nodes of the portion, calculating possible paths

between a departure node (Ns) and an arrival node, allowing for at least two chosen

criteria, and then deducing an ideal solution from performances of the possible paths

based on the criteria (Kelley et al. see column 8, lines 57-67, column 9, lines 1-20, and

see fig. 2). In the reference, at least one pair of maximally disjoint paths and a primary

path should be pre-calculated based on various network parameters, such as cost

(delay), bandwidth and bandwidth threshold. The pre-calculated paths are potentially or

ideally selected if they also satisfied a user request; c) assigning each possible path a

value of interest allowing for the ideal solution (see fig. 5A, column 9, lines 34-67,

column 10, lines 1-67). Each pre-calculated path is assigned with bandwidth value; and

then classifying the possible paths allowing for their respective values of interest (see

column 6, lines 10-18). Each determined pairs of maximally disjoint paths is classified

into groups. For example, one group is categorized with bandwidth over 100 M/s, and

other group is categorized with bandwidth over 50 M/s and d) selecting from the

classified possible paths the k best classified paths, in order to route data via one of the

k paths (see column 14, lines 62-67, column 15, lines 1-40, see fig. 1A). In response to

a request for a transfer of data, the source node 12 either selects one of the pre-

computed paths (a pair of maximally disjoint path, and a primary path) based on the

requested path constraints. If the network parameters of certain pre-calculated path

satisfied with the constraint, it will select that path as the best path.

Regarding claims 2, 21 Kelley et al. disclosed the method of characterized in that

step a) begins by determining from the multiplicity of nodes all the pairs of nodes that

can establish between them an oriented link each supporting at least one chosen local

constraint, after which it is ensured that all the nodes of the pairs are connected (Kelley

et al. see fig. 1, see column 2, lines 52-67). The system ensures that the probability of

inoperable link or nodes blocks a transfer of data is minimized. Therefore, the system is

trying to ensure all nodes are connected and active by pre-calculating the paths which

satisfied the bandwidth and cost criterias.

Regarding claims 3, 22 Kelley et al. disclosed the method of characterized in that

at the end of step b) there are retained from the possible paths those that each satisfy

at least one chosen global constraint so that in step c) values of interest are assigned to

the retained possible paths (Kelley et al. see column 8, lines 57-67, column 9, lines 1-

20, and see fig. 2). In the reference, at least one pair of maximally disjoint paths and a

primary path should be pre-calculated based on various network parameters, such as

cost (delay) and bandwidth and bandwidth threshold.

Regarding claims 4, 23 Kelley et al. disclosed the method of characterized in that

at least one of the criteria is of the non-additive type (Kelley et al. see column 8, lines

57-67, column 9, lines 1-20, and see fig. 2). In the reference, at least one pair of

maximally disjoint paths and a primary path should be pre-calculated based on various

network parameters, such as cost (delay) and bandwidth and bandwidth threshold. The

bandwidth threshold is a non-additive type.

Regarding claims 8, 27 Kelley et al. disclosed the method of characterized in that

in step b) representative values of the possible paths performance are determined for

each path with respect to each of the chosen criteria and a path for which the

performance values are non-dominated is qualified as a possible path (see fig. 5A,

column 9, lines 34-67, column 10, lines 1-67). Each pre-calculated path is assigned with

bandwidth value.

Regarding claims 9, 28 Kelley et al. disclosed the method of characterized in that

in step b) a best performance value observed over the possible paths, referred to as an

optimum value, is determined for each criterion and the ideal solution is then

constructed in the form of a multiplet of components constituted of the various optimum

values thus determined (column 6, lines 43-67, column 7, lines 1-45).

Regarding claims 12, 31 Kelley et al. disclosed the method of characterized in

that the local and/or global constraints are selected from a group comprising at least a

minimum bandwidth required, the maximum length of the path, the maximum duration of

the path, at least one prohibited link, the maximum number of hops on the path, and a

path color restriction (Kelley et al. see column 8, lines 57-67, column 9, lines 1-20, and

see fig. 2). In the reference, at least one pair of maximally disjoint paths and a primary

path should be pre-calculated based on various network parameters, such as cost

(delay) and bandwidth and bandwidth threshold.

Regarding claims 17, 36 Kelley et al. disclosed the method of characterized in

that the criteria are chosen as a function of the type of service required (Kelley et al. see

column 8, lines 1-12).

Regarding claims 18, 37 Kelley et al. disclosed the method of characterized in

that the chosen criteria are weighted as a function of their importance in the light of

management information (Kelley et al. see column 6, lines 43-67, column 7, lines 1-45).

Regarding claims 19, 38 Kelley et al. disclosed the method of characterized in

that the constraints and their associated values are chosen as a function of the quality

of service required (Kelley et al. see column 14, lines 60-67, column 15, lines 1-30).

Regarding system claim 20, same rejection is applied as for method claim 1.

Regarding claim 39 Kelley et al. disclosed the method of the communication

network is an IP communication networks (Kelley et al. see column 1, lines 19-30).

Regarding claim 40 Kelley et al. disclosed the method of wherein the method is

implemented with link state routing protocols supporting TE-LSA traffic management

(Kelley et al. column 1, lines 37-52)

Claim Rejections - 35 USC § 103

4.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

5.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 5,6,24,25 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kelley et al. (Pat No.: 6542469) in view of Gunluk (Pat No.: 7023806).

For claim 5, 24 Kelley et al. disclosed all the subject matter of the claimed invention with the exception of characterized in that step b) integrates a trace storing a route corresponding to a partial path, in order to detect and prevent cycles in the paths under construction. Gunluk from the same or similar fields of endeavor teaches the method of characterized in that step b) integrates a trace storing a route corresponding to a partial path, in order to detect and prevent cycles in the paths under construction (Gunluk see column 9, lines 43-50). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Gunluk in the network of Kelley et al. The motivation of using the method as taught by Gunluk in the network of Kelley et al. being that it reduces the processing time delay.

Regarding claim 6, 25 Kelley et al. disclosed the method of characterized in that in step b), during the procedure of eliminating the partial paths, there are retained solutions that are weakly non-dominated on the non-additive criterion (see column 6, lines 10-18). Each determined pairs of maximally disjoint paths is classified into groups. For example, one group is categorized with bandwidth over 100 M/s, and other group is categorized with bandwidth over 50 M/s. These two groups are weakly non-dominated solution on the non-additive criterion.

8.   Claims 7,26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley et al. (Pat No.: 6542469) in view of Khnotimsky et al. (Pat No.: 6646989).

For claim 7, 26 Kelley et al. disclosed all the subject matter of the claimed invention with the exception of characterized in that connectivity is verified by a mechanism of propagation from the departure node to all the other nodes of the multiplicity of nodes, so that each node is visited. Khnotimsky from the same or similar fields of endeavor teaches the method of characterized in that connectivity is verified by a mechanism of propagation from the departure node to all the other nodes of the multiplicity of nodes, so that each node is visited (Khntimsky et al. see column 7, lines 39-45). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Khnotimsky et al. in the network of Kelley et al. The motivation of using the method as taught by Khnotimsky et al. in the network of Kelley et al. being that it reduces the processing time delay.

9.   Claims 13, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley et al. (Pat No.: 6542469) in view of Izmailov et al. (Pub No.: 2003/0058797).

For claim 13, 32 Kelley et al. disclosed all the subject matter of the claimed invention with the exception of characterized in that the criteria are selected from a group comprising at least the available bandwidth, the number of hops on the path, and the duration of the path. Izmailov et al. from the same or similar fields of endeavor teaches the method of characterized in that the criteria are selected from a group comprising at least the available bandwidth, the number of hops on the path, and the duration of the path (Izmailov et al. see column 0039, lines 11-30). Thus, it would have

been obvious to the person of ordinary skill in the art at the time of the invention to use

the method as taught by Izmailov et al. in the network of Kelley et al. The motivation of

using the method as taught by Izmailov et al. in the network of Kelley et al. being that it

enhances the system features.

10.   Claims 14, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kelley et al. (Pat No.: 6542469) in view of Izmailov et al. (Pub No.: 2003/0058797), as

applied to claim 13 above, and further in view of Roginsky et al. (Pat No.: 6034946).

For claim 14, 33 Kelley et al. and Izmailov et al. both did not disclosed the

method of characterized in that the chosen criteria used in step b) comprise the

available bandwidth and the duration of the path. Roginsky et al. from the same or

similar fields of endeavor teaches the method of characterized in that the chosen criteria

used in step b) comprise the available bandwidth and the duration of the path (Roginsky

et al. see column 12, lines 24-40). Thus, it would have been obvious to the person of

ordinary skill in the art at the time of the invention to use the method as taught by

Roginsky et al. in the network of Kelley et al. The motivation of using the method as

taught by Roginsky et al. in the network of Kelley et al. being that it enhances the

system features.

Regarding claims 15, 34 Izmailov et al. disclosed the method of characterized in

that in step b) the criterion relating to the duration of the path is impacted by a penalty

(Izmailov et al. see column 0039, lines 11-30).

Regarding claims 16, 35 Izmailov et al. disclosed the method of characterized in that the penalty applies to the administration cost of the path (Izmailov et al. see column 0039, lines 11-30).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kan Yuen whose telephone number is 571-270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KY

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